

MILLIMETER-WAVE UNILATERAL LOW-NOISE AMPLIFIER

Abstract of the Disclosure

Principles of the present invention provide improved amplifiers such as low-noise amplifiers. While such amplifiers may be suitable in many applications, such amplifiers may provide improved noise, gain and stability performance at millimeter-wave frequencies. In a first aspect of the invention, an amplifier includes a first amplifying stage including a common-base transistor, and a second amplifying stage, coupled to the first amplifying stage, including a cascode transistor pair. The amplifier may be implemented in accordance with a silicon-based technology (e.g., silicon germanium) and may employ microstrip shunt-stub transmission lines as matching networks.